

Dell'Amico Research Group

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The activity of the group focuses on different research topics:

- 1) The design, synthesis, and characterization of novel organic photocatalysts, and their utilization in innovative light-driven processes.
- 2) The development of novel sustainable synthetic methods, involving the use of organocatalysis, photocatalysis, and flow chemistry to access important biologically active compounds and key structural building blocks.
- 3) The study and elucidation of complex light-driven transformations by means of in-situ NMR, laser flash photolysis, as well as DFT analysis.

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1. "The Rational Design of Reducing Organophotoredox Catalysts Unlocks Proton-Coupled Electron-Transfer and Atom Transfer Radical Polymerization Mechanisms" *J. Am. Chem. Soc.* **2023**, *145*, 1835–1846.
2. "Unveiling the impact of the light-source and steric factors on [2+2] heterocycloaddition reactions" *Nat. Synth.*, **2023**, *2*, 26–36.
3. "A General Organophotoredox Strategy to Difluoroalkyl Bicycloalkane (CF₂-BCA) Hybrid Bioisosteres" *Angew. Chem. Int. Ed.* **2023**, *135*, e2023035.
4. "A Rational Approach to Organo-Photocatalysis. Novel Designs and Structure-Property-Relationships" *Angew. Chem. Int. Ed.* **2021**, *133*, 1096-1111.
5. "Mechanisms and Synthetic Strategies in Visible-Light-Driven [2+2]-Heterocycloadditions" *Angew. Chem. Int. Edit.*, **2023**, *62*, e202217210.